



Docket No.: 34009:E (AMENDED)

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES**

In re Patent Application of: Joseph G. RADZIK)	Confirmation No.: 5169
)	
Application No.: 09/965,983)	Group Art Unit: 3672
)	
Filed: 28 September 2001)	Examiner: Collins, G.
)	
For: FERROUS PIPE COUPLINGS AND)	
PRELUBRICATED COUPLING GASKETS)	

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APPEAL BRIEF

Sir:

Appellant hereby appeals the final rejection of the above-identified application to the Board of Patent Appeals and Interferences.

Appellant's brief is being submitted in support of the Notice of Appeal, filed 26 January 2006, appealing to the Board of Patent Appeals and Interferences the last decision of the Examiner, i.e., a final Office Action issued 26 October 2005.

Submitted herewith is a Petition For Extension of Time to extend the period for filing this brief through April 26, 2006 in accordance with 37 C.F.R. § 1.6(a).

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I. REAL PARTY IN INTEREST

Central Sprinkler Corporation, a Pennsylvania corporation having a place of business at 451 North Cannon Avenue, Lansdale, Pennsylvania 19446, as the assignee of record owns the entire right, title and interest in the captioned application and, therefore, is the real party in interest.

II. RELATED APPEALS AND INTERFERENCES

Appellant is aware of no other current appeals, interferences or judicial proceedings that may be related to, directly affect or have a bearing on the Board's decision in the pending appeal.

III. STATUS OF CLAIMS

Claims 1-23 are pending, stand finally rejected and are under appeal. A copy of the claims on appeal are appended to this brief.

IV. STATUS OF AMENDMENTS

All amendments of record have been entered.

V. SUMMARY OF CLAIMED SUBJECT MATTER

Appellant's invention is directed generally to a pipe coupling for coupling various pipe components of ferrous pipe systems. Appellant has innovated a pipe coupling in which the elastomeric gasket member employs a powder coating which allows the gasket to be lubricated, then packaged or supplied at any point prior to installation thereby making coupling installation easier and less messy as compared to coupling installations using previously known lubricants.

Appellant's invention is more specifically directed to innovative, novel and non-obvious gaskets, couplings, piping systems and improved ferrous couplings that include a powder coating. In one preferred embodiment of appellant's invention, a lubricated ferrous pipe coupling gasket includes a tubular, one-piece elastomeric member with a pair of circumferential flanges. The novel gasket further includes a powder coating that provides a dry lubricant on at least the inner circumferential side of the pair of flanges. *See* FIGS. 2-6, page 6, line 1 to page 7, line 15; FIG. 5, page 8, lines 1-3. In another preferred embodiment, a ferrous pipe coupling includes, *inter alia*, a ferrous collar and a gasket in the form of a tubular, one-piece elastomeric member positioned in the collar having an exposed inner circumferential side, and a coating of dry powder lubricant on at least the exposed side of the elastomeric member. *See id.*; *see also* page 7, line 16 to line 22; page 8, line 4 to line 16. Appellant's invention is also directed to a ferrous piping system which includes, among other features, a plurality of ferrous components, and at least one ferrous pipe coupling joining a pair of piping components in which the coupling further includes a gasket in the form of a tubular, one-piece elastomeric member having an inner circumferential side sealingly mounted on the ends of the pair of piping components and a coating of cornstarch powder at least between the inner circumferential side of the gasket and the ends of the pair of piping components. *See* FIG. 1, page 3, line 18 to page 7, line 15. Lastly, Appellant's invention provides an improvement upon a ferrous coupling. More specifically, Appellant's invention is directed to ferrous pipe coupling including a tubular, one-piece gasket, a ferrous collar surrounding the gasket in which the improvement includes a coating of dry powder lubricant on at least an inner circumferential side of the gasket. *See* FIGS 2-6, page 6, line 1 to page 7, line 15; FIG. 5, page 8, lines 1 to page 9, line 20.

Known pipe couplings use a gasket lubricated with an oily liquid or greasy solid material so that the gasket can be more easily and safely slipped over the adjoining ends of the piping components thereby preventing damage to the gasket during installation. Various types of oils and/or greases are used depending upon the gasket, pipe, fitting and coupling materials involved. Such lubrication is usually supplied in a separate container and then manually applied to the gasket just prior to installation. This keeps the lubricant fresh and prevents the collection of dirt and debris on the lubricant coating prior to use of the gasket. However, it makes for a time-consuming and messy process to prepare the gasket for installation. *See* page 1, lines 5-11, of Appellant's specification as originally filed. Prior to Appellant's invention, dry lubricants on a gasket have also been used. For example, U.S. Patent No. 6,371,491 to Schultz et al. ("Schultz") describes an "elastomeric gasket for a pipe coupling having a dry lubricating film of an aqueous solution of a lubricant and a film-forming polymer adhered thereto." Schultz's lubricant is "an aqueous suspension of graphite, soaps, or a natural or synthetic wax dispersed in a film-forming polymer" (column 4, lines 17-21). According to Schultz, the "lubricating film is applied to the gaskets after their manufacture by any of a variety of conventional application methods including spraying, fogging, dipping, sponging, painting, etc." (column 4, line 66, to column 5, line 12).

In contrast, Appellant's novel lubricated ferrous pipe coupling and gasket includes a powder coating that provides a dry lubricant on at least the inner circumferential side of the pair of flanges. Shown and described in the application as originally filed are preferred embodiments of the novel gasket 30,130 exposed to and directly in contact with the ends 14a, 15a of joined piping components 14, 15. The gaskets 30, 130, or at least their inner circumferential sides 33,34 are covered with a coating 40 of a dry powder such as, for example, cornstarch, rice starch, potato starch, talc and magnesium silicate hydroxide instead of a wet liquid or greasy solid. *See* page 6, line 20, to page 7, line 2, and page 8, line 17, to page 9, line 2, of Appellant's specification as originally filed.

To apply the dry lubricant or powder to the gasket 30,130, the gasket 30,130 can be tumbled with cornstarch or other conventional grade powder in a suitable agitator. For example, a drum, rotating at a speed suitable to tumble the gasket 30,130 and to tumble the powder onto the gasket 30,130 may be used. *See* page 7, lines 2-8, of Appellant's specification as originally filed. The dry cornstarch powder tends to uniformly cover all surfaces of the dry elastomeric

gasket 30,130, possibly by electrostatic attraction where the gasket is formed from nitrile or ethylene, propylene, diene monomer ("EPDM"). *See* page 7, lines 8-10, of Appellant's specification as originally filed.

The cornstarch powder can be applied at any time before installation but is preferably applied during manufacture before assembly of the coupling 116, 316, 416. The coupling 116, 316, 416 can then be shipped to distributors and end users in a prelubricated form ready for installation. It has been found that simple rubbing or handling cannot significantly remove the cornstarch powder. It is not sticky or tacky and does not attract dust, dirt or other contaminants before use. *See* page 7, lines 10-15, of Appellant's specification as originally filed. Thus, Applicant's have discovered innovative, novel and non-obvious, gaskets, couplings, piping systems and improved ferrous couplings that have advantageous utility over gaskets and couplings using known lubricants.

VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

Whether claims 1, 5-6, 10, 16 and 20-23 are unpatentable under 35 U.S.C. § 103(a) over U.S. Patent No. 6,302,450 to Dole et al. ("Dole") in view of U.S. Patent No. 4,230,157 to Larsen et al. ("Larsen") and Appellant's Prior Art disclosure.

Whether claims 2-4, 7-9 and 17-19 are unpatentable under 35 U.S.C. § 103(a) over Dole in view of Larsen and Appellant's Prior Art disclosure as applied to claims 1, 5 and 16, and further in view of U.S. Patent No. 5,070,597 to Holt et al. ("Holt").

Whether claim 11 is unpatentable under 35 U.S.C. § 103(a) over Dole in view of Larsen and Appellant's Prior Art disclosure as applied to claim 10, and further in view of U.S. Patent No. 5,540,465 to Sisk ("Sisk").

Whether claim 12 is unpatentable under 35 U.S.C. § 103(a) over Dole in view of Larsen, Appellant's Prior Art disclosure and Sisk as applied to claim 11, and further in view of U.S. Patent No. 5,642,907 to Dole ("Dole '907").

Whether claims 13-15 are unpatentable under 35 U.S.C. § 103(a) over Dole in view of Larsen, Appellant's Prior Art disclosure and Sisk as applied to claim 11, and further in view of Holt.

VII. ARGUMENT

A. Claims 1 is not obvious over Dole in view of Larsen and Appellant's Prior Art disclosure

Independent claim 1 recites a pipe coupling that includes, *inter alia*, a tubular, one-piece, elastomeric member formed by a circumferential wall and at least a pair of circumferential flanges, and “a powder coating that provides a dry lubricant on at least the inner circumferential side of the pair of flanges.” Support for these features of independent claim 1 may be found in the application as originally filed. For example, with regard to a preferred embodiment discussed in paragraph 0021, a surface coating of a powder may be applied to a gasket, such as by tumbling the gasket and the powder in an agitator. The powder coating, which tends to uniformly cover the gasket, provides a dry lubricant in an amount that is effective to lubricate the gasket during mounting over piping component ends. Because the powder coating that provides the lubricant cannot be significantly removed in the course of rubbing or handling, it can be applied at any time before installation of the gasket. Moreover, because the powder coating provides a dry lubricant, it is neither sticky nor tacky and does not attract dust, dirt or other contaminants before installation of the gasket. As discussed in paragraph 0026 of the application as originally filed, preferred powder coatings that provide a dry lubricant may include cornstarch, rice starch, potato starch, other organic starches, and talc, i.e., magnesium silicate hydroxide.

Thus, a dry lubricant that is provided by a powder coating, as recited in Appellant's independent claim 1, has a number of advantages including that a uniform covering may be achieved, inadvertent removal of the coating may be avoided, and prelubrication at any time prior to installation is possible. In contrast, gaskets that utilize an oil/grease lubricant tend to collect dirt and debris. Thus, the oil/grease lubricant is supplied separately from the gasket and then generally applied just prior to installation of the gasket. *See* paragraph 0002 of the application as originally filed.

According to the Office Action, claim 1 is rejected under 35 U.S.C. § 103(a) as purportedly being unpatentable over Dole in view of Larsen and the Appellant's Prior Art disclosure. Dole shows and describes a segmented, high-strength pipe coupling 10 for

connecting two pipes 100 and 200. Dole's Figure 5 shows a pipe coupling 10 that has a lubricated gasket 32 with respective inner circumferential surfaces (not labeled) in contact with the exterior surface of each pipe. *See* Dole column 5, lines 22-36. As the Office Action acknowledges, Dole fails to show or describe the type of lubricant or its location on the gasket 32, and more specifically the Office Action acknowledges that, Dole fails to show or describe a powder coating that provides a dry powder lubricant.

In an attempt to cure the deficiency of Dole and reach the claimed invention, the Office Action relies on Larsen to allegedly teach that "[d]ry powder lubricant is a suitable lubricant to use in place of a grease lubricant on a gasket." However, Larsen fails to teach or suggest to one of ordinary skill in the relevant art to modify, in any way, the gasket of Dole. In particular, Larsen provides no guidance to one of ordinary skill in the art regarding gaskets and/or couplings for ferrous pipes. Moreover, Larsen fails to teach or suggest that a lubricant, whether a wet lubricant or dry lubricant, can be applied on an inner circumference of lip portion 7 of seal ring 3, which forms a seal with the outer surface of pipe 1a. Moreover, Larsen fails to teach or suggest that a powder coating of a dry lubricant can be applied.

In particular, Larsen's Figure 1 shows a pipe end portion 1 with a circumferential groove 2 on which a sealing ring 3 is constrained within the groove 2. *See* Larsen column 5, lines 26-48. The sealing ring 3 of Larsen has circumferential lip portions 6 and 7. Lubricant 9 or 9', which can be a wet lubricant or dry lubricant, is provided to facilitate movement of various lip portions 6, 7 with respect to each other as the sealing ring 3 is compressed in the groove 2 when a second pipe 1a is inserted into the first pipe 1. Larsen specifically requires the lubricant to be placed in two places: (1) between the lip portion 6 of the stiffening body (i.e., lubricant 9'), and (2) between the lip portion 6 and the groove 2 (i.e., lubricant 9), as shown in Larsen's Figure 1 of Larsen. *See* Larsen column 6, lines 7-21.

Because of the specificity of the locations on which a dry powder lubricant is to be used in Larsen, Larsen fails to provide any suggestion, motivation, or reason to combine features of Larsen with Dole so as to render the claimed invention as a whole obvious. Instead, the Office Action relies on Appellant's own specification at page 1, lines 5-6, and page 6, lines 15-20, to allegedly suggest lubricating at least the inner surface of Dole's gasket, with the dry lubricant as allegedly taught by Larsen.

Even if Dole's gasket 32 could be modified in view of Larsen's dry lubricant, and at the location(s) allegedly suggested by Appellant's own specification, propositions that Appellant does not accept, the references would still fail to teach each and every feature of the invention as recited in independent claim 1. Specifically, Dole and Larsen fail to teach or suggest a powder coating in combination with an elastomeric member as claimed. Absent the benefit of Appellant's originally filed application, there is no suggestion or motivation to provide a powder coating. Therefore, Dole and Larsen, whether taken alone or in combination, fail to teach or suggest Appellant's invention as a whole.

Thus, for at least any of these reasons, it is respectfully submitted that the rejection under 35 U.S.C. § 103(a) of independent claim 1 should be reversed, and that this claim is patentable over the applied prior art.

B. Claims 5, 6, and 21 are not obvious over Dole in view of Larsen and Appellant's Prior Art disclosure

Independent claim 5 recites a pipe coupling that includes, *inter alia*, a ferrous collar, a gasket in the form of a tubular, one-piece elastomeric member positioned in the collar and having an exposed inner circumferential side, and "a powder coating that provides a dry lubricant on at least the inner circumferential side." Support for these features of independent claim 5 may be found in the application as originally filed. For example, with regard to a preferred embodiment discussed in paragraph 0021, a surface coating of a powder may be applied to a gasket, such as by tumbling the gasket and the powder in an agitator. The powder coating, which tends to uniformly cover the gasket, provides a dry lubricant in an amount that is effective to lubricate the gasket during mounting over piping component ends. Because the powder coating that provides the lubricant cannot be significantly removed in the course of rubbing or handling, it can be applied at any time before installation of the gasket. Moreover, because the powder coating provides a dry lubricant, it is neither sticky nor tacky and does not attract dust, dirt or other contaminants before installation of the gasket. As discussed in paragraph 0026, preferred powder coatings that provide a dry lubricant may include cornstarch, rice starch, potato starch, other organic starches, and talc, i.e., magnesium silicate hydroxide.

Thus, a dry lubricant that is provided by a powder coating, as recited in Appellant's independent claim 5, has a number of advantages including that a uniform covering may be

achieved, inadvertent removal of the coating may be avoided, and prelubrication at any time prior to installation is possible. In contrast, gaskets that utilize an oil/grease lubricant tend to collect dirt and debris. Thus, the oil/grease lubricant is supplied separately from the gasket and then generally applied just prior to installation of the gasket. *See* paragraph 0002 of the application as originally filed.

According to the Office Action, claim 5 is rejected under 35 U.S.C. § 103(a) as purportedly being unpatentable over Dole in view of Larsen and the Appellant's Prior Art disclosure. Dole shows and describes a segmented, high-strength pipe coupling 10 for connecting two pipes 100 and 200. Dole's Figure 5 shows a pipe coupling 10 that has a lubricated gasket 32 with respective inner circumferential surfaces (not labeled) in contact with the exterior surface of each pipe. *See* Dole column 5, lines 22-36. As the Office Action acknowledges, Dole fails to show or describe the type of lubricant or its location on the gasket 32. Thus, Dole fails to show or describe the combination of the collar, elastomeric member and dry powder as claimed.

In an attempt to cure the deficiency of Dole and reach Appellant's claimed invention, the Office Action relies on Larsen to allegedly teach that "[d]ry powder lubricant is a suitable lubricant to use in place of a grease lubricant on a gasket." However, Larsen fails to teach or suggest to one of ordinary skill in the relevant art to modify, in any way, the gasket of Dole. In particular, Larsen provides no guidance to one of ordinary skill in the art regarding gaskets and/or couplings for ferrous pipes. Moreover, Larsen fails to teach or suggest that a lubricant, whether a wet lubricant or dry lubricant, can be applied on an inner circumference of lip portion 7 of seal ring 3, which forms a seal with the outer surface of pipe 1a. Moreover, Larsen fails to teach or suggest that a powder coating of a dry lubricant can be applied.

In particular, Larsen's Figure 1 shows a pipe end portion 1 with a circumferential groove 2 on which a sealing ring 3 is constrained within the groove 2. *See* Larsen column 5, lines 26-48. The sealing ring 3 of Larsen has circumferential lip portions 6 and 7. Lubricant 9 or 9', which can be a wet lubricant or dry lubricant, is provided to facilitate movement of various lip portions 6, 7 with respect to each other as the sealing ring 3 is compressed in the groove 2 when a second pipe 1a is inserted into the first pipe 1. Larsen specifically requires the lubricant to be placed in two places: (1) between the lip portion 6 of the stiffening body (i.e., lubricant 9'), and (2)

between the lip portion 6 and the groove 2 (i.e., lubricant 9), as shown in Larsen's Figure 1 of Larsen. See Larsen column 6, lines 7-21.

Because of the specificity of the locations on which a dry powder lubricant is to be used in Larsen, Larsen fails to provide any suggestion, motivation, or reason to combine features of Larsen with Dole so as to render the claimed invention as a whole obvious. Instead, the Office Action relies on Appellant's own specification at page 1, lines 5-6, and page 6, lines 15-20, to allegedly suggest lubricating at least the inner surface of Dole's gasket, with the dry lubricant as allegedly taught by Larsen.

Even if Dole's gasket 32 could be modified in view of Larsen's dry lubricant, and at the location(s) allegedly suggested by Appellant's own specification, propositions that Appellant does not accept, the references would still fail to teach each and every feature of the invention as recited in independent claim 5. Specifically, Dole and Larsen fail to teach or suggest a powder coating. Moreover, nowhere in Dole or Larsen is it taught or suggested to combine a powder coating with a collar and elastomeric member as claimed. Thus, absent the benefit of Appellant's originally filed application, there is no suggestion or motivation to provide a powder coating. Accordingly, Dole and Larsen, whether taken alone or in combination, fail to teach or suggest Appellant's invention as a whole.

For at least any of these reasons, it is respectfully submitted that the rejection under 35 U.S.C. § 103(a) of independent claim 5 should be reversed, and that this claim is patentable over the applied prior art. Moreover, claims 6 and 21 depend from independent claim 5 and are therefore also patentable for at least the same reasons, as well as for the additionally recited features that further distinguish over the applied prior art.

C. Claims 10 and 22 are not obvious over Dole in view of Larsen and Appellant's Prior Art disclosure

Independent claim 10 recites a piping system that includes, *inter alia*, a plurality of ferrous piping components and at least one ferrous pipe coupling further including a ferrous collar, a gasket in the form of a tubular one-piece elastomeric member having an inner circumferential side sealingly mounted on the ends of the pair of piping components and "a powder coating that provides a dry lubricant at least between the at least one flange of the inner circumferential side of the gasket and the ends of the piping components." Support for these

features of independent claim 10 may be found in the application as originally filed. For example, with regard to a preferred embodiment discussed in paragraph 0021, a surface coating of a powder may be applied to a gasket, such as by tumbling the gasket and the powder in an agitator. The powder coating, which tends to uniformly cover the gasket, provides a dry lubricant in an amount that is effective to lubricate the gasket during mounting over piping component ends. Because the powder coating that provides the lubricant cannot be significantly removed in the course of rubbing or handling, it can be applied at any time before installation of the gasket. Moreover, because the powder coating provides a dry lubricant, it is neither sticky nor tacky and does not attract dust, dirt or other contaminants before installation of the gasket. As discussed in paragraph 0026, preferred powder coatings that provide a dry lubricant may include cornstarch, rice starch, potato starch, other organic starches, and talc, i.e., magnesium silicate hydroxide.

Thus, a dry lubricant that is provided by a powder coating, as recited in Appellant's independent claim 10, has a number of advantages including that a uniform covering may be achieved, inadvertent removal of the coating may be avoided, and prelubrication at any time prior to installation is possible. In contrast, gaskets that utilize an oil/grease lubricant tend to collect dirt and debris. Thus, the oil/grease lubricant is supplied separately from the gasket and then generally applied just prior to installation of the gasket. *See* paragraph 0002 of the application as originally filed.

According to the Office Action, claim 10 is rejected under 35 U.S.C. § 103(a) as purportedly being unpatentable over Dole in view of Larsen and the Appellant's Prior Art disclosure. Dole shows and describes a segmented, high-strength pipe coupling 10 for connecting two pipes 100 and 200. Dole's Figure 5 shows a pipe coupling 10 that has a lubricated gasket 32 with respective inner circumferential surfaces (not labeled) in contact with the exterior surface of each pipe. *See* Dole column 5, lines 22-36. As the Office Action acknowledges, Dole fails to show or describe the type of lubricant or its location on the gasket 32. Thus, Dole fails to show or describe a piping system as claimed.

In an attempt to cure the deficiency of Dole and reach Appellant's claimed invention, the Office Action relies on Larsen to allegedly teach that "[d]ry powder lubricant is a suitable lubricant to use in place of a grease lubricant on a gasket." However, Larsen fails to teach or

suggest to one of ordinary skill in the relevant art to modify, in any way, the gasket of Dole. In particular, Larsen provides no guidance to one of ordinary skill in the art regarding gaskets and/or couplings for ferrous pipes. Moreover, Larsen fails to teach or suggest that a lubricant, whether a wet lubricant or dry lubricant, can be applied on an inner circumference of lip portion 7 of seal ring 3, which forms a seal with the outer surface of pipe 1a. Moreover, Larsen fails to teach or suggest that a powder coating of a dry lubricant can be applied.

In particular, Larsen's Figure 1 shows a pipe end portion 1 with a circumferential groove 2 on which a sealing ring 3 is constrained within the groove 2. *See* Larsen column 5, lines 26-48. The sealing ring 3 of Larsen has circumferential lip portions 6 and 7. Lubricant 9 or 9', which can be a wet lubricant or dry lubricant, is provided to facilitate movement of various lip portions 6, 7 with respect to each other as the sealing ring 3 is compressed in the groove 2 when a second pipe 1a is inserted into the first pipe 1. Larsen specifically requires the lubricant to be placed in two places: (1) between the lip portion 6 of the stiffening body (i.e., lubricant 9'), and (2) between the lip portion 6 and the groove 2 (i.e., lubricant 9), as shown in Larsen's Figure 1 of Larsen. *See* Larsen column 6, lines 7-21.

Because of the specificity of the locations on which a dry powder lubricant is to be used in Larsen, Larsen fails to provide any suggestion, motivation, or reason to combine features of Larsen with Dole so as to render the claimed invention as a whole obvious. Instead, the Office Action relies on Appellant's own specification at page 1, lines 5-6, and page 6, lines 15-20, to allegedly suggest lubricating at least the inner surface of Dole's gasket, with the dry lubricant as allegedly taught by Larsen.

Even if Dole's gasket 32 could be modified in view of Larsen's dry lubricant, and at the location(s) allegedly suggested by Appellant's own specification, propositions that Appellant does not accept, the references would still fail to teach each and every feature of the invention as recited in independent claim 10. Specifically, Dole and Larsen fail to teach or suggest a powder coating. Moreover, nowhere in Dole or Larsen is it taught or suggested to combine a powder coating with a plurality of ferrous piping components, a ferrous coupling and elastomeric member as claimed. Thus, absent the benefit of Appellant's originally filed application, there is no suggestion or motivation to provide a powder coating. Accordingly, Dole and Larsen, whether taken alone or in combination, fail to teach or suggest Appellant's invention as a whole.

For at least any of these reasons, it is respectfully submitted that the rejection under 35 U.S.C. § 103(a) of independent claim 10 should be reversed, and that this claim is patentable over the applied prior art. Moreover, claim 22 depends from independent claim 10 and is therefore also patentable for at least the same reasons, as well as for the additionally recited features that further distinguish over the applied prior art.

D. Claims 16, 20 and 23 are not obvious over Dole in view of Larsen and Appellant's Prior Art disclosure

Independent claim 16 recites an improvement in a ferrous pipe couplings that includes, *inter alia*, an elastomeric gasket having at least one flange, a ferrous collar surrounding the gasket, and the improvement which include “a powder coating that provides a dry lubricant on at least an inner circumferential side of the at least one flange of the gasket.” Support for these features of the independent claims may be found in the application as originally filed. For example, with regard to a preferred embodiment discussed in paragraph 0021, a surface coating of a powder may be applied to a gasket, such as by tumbling the gasket and the powder in an agitator. The powder coating, which tends to uniformly cover the gasket, provides a dry lubricant in an amount that is effective to lubricate the gasket during mounting over piping component ends. Because the powder coating that provides the lubricant cannot be significantly removed in the course of rubbing or handling, it can be applied at any time before installation of the gasket. Moreover, because the powder coating provides a dry lubricant, it is neither sticky nor tacky and does not attract dust, dirt or other contaminants before installation of the gasket. As discussed in paragraph 0026, preferred powder coatings that provide a dry lubricant may include cornstarch, rice starch, potato starch, other organic starches, and talc, i.e., magnesium silicate hydroxide.

Thus, a dry lubricant that is provided by a powder coating, as recited in Appellant's independent claim 16, has a number of advantages including that a uniform covering may be achieved, inadvertent removal of the coating may be avoided, and prelubrication at any time prior to installation is possible. In contrast, gaskets that utilize an oil/grease lubricant tend to collect dirt and debris. Thus, the oil/grease lubricant is supplied separately from the gasket and then generally applied just prior to installation of the gasket. *See* paragraph 0002 of the application as originally filed.

According to the Office Action, claim 16 is rejected under 35 U.S.C. § 103(a) as purportedly being unpatentable over Dole in view of Larsen and the Appellant's Prior Art disclosure. Dole shows and describes a segmented, high-strength pipe coupling 10 for connecting two pipes 100 and 200. Dole's Figure 5 shows a pipe coupling 10 that has a lubricated gasket 32 with respective inner circumferential surfaces (not labeled) in contact with the exterior surface of each pipe. *See* Dole column 5, lines 22-36. As the Office Action acknowledges, Dole fails to show or describe the type of lubricant or its location on the gasket 32. Thus, Dole fails to show or describe the ferrous coupling and its improvement as claimed.

In an attempt to cure the deficiency of Dole and reach Appellant's claimed invention, the Office Action relies on Larsen to allegedly teach that "[d]ry powder lubricant is a suitable lubricant to use in place of a grease lubricant on a gasket." However, Larsen fails to teach or suggest to one of ordinary skill in the relevant art to modify, in any way, the gasket of Dole. In particular, Larsen provides no guidance to one of ordinary skill in the art regarding gaskets and/or couplings for ferrous pipes. Moreover, Larsen fails to teach or suggest that a lubricant, whether a wet lubricant or dry lubricant, can be applied on an inner circumference of lip portion 7 of seal ring 3, which forms a seal with the outer surface of pipe 1a. Moreover, Larsen fails to teach or suggest that a powder coating of a dry lubricant can be applied.

In particular, Larsen's Figure 1 shows a pipe end portion 1 with a circumferential groove 2 on which a sealing ring 3 is constrained within the groove 2. *See* Larsen column 5, lines 26-48. The sealing ring 3 of Larsen has circumferential lip portions 6 and 7. Lubricant 9 or 9', which can be a wet lubricant or dry lubricant, is provided to facilitate movement of various lip portions 6, 7 with respect to each other as the sealing ring 3 is compressed in the groove 2 when a second pipe 1a is inserted into the first pipe 1. Larsen specifically requires the lubricant to be placed in two places: (1) between the lip portion 6 of the stiffening body (i.e., lubricant 9'), and (2) between the lip portion 6 and the groove 2 (i.e., lubricant 9), as shown in Larsen's Figure 1 of Larsen. *See* Larsen column 6, lines 7-21.

Because of the specificity of the locations on which a dry powder lubricant is to be used in Larsen, Larsen fails to provide any suggestion, motivation, or reason to combine features of Larsen with Dole so as to render the claimed invention as a whole obvious. Instead, the Office Action relies on Appellant's own specification at page 1, lines 5-6, and page 6, lines 15-20, to

allegedly suggest lubricating at least the inner surface of Dole's gasket, with the dry lubricant as allegedly taught by Larsen.

Even if Dole's gasket 32 could be modified in view of Larsen's dry lubricant, and at the location(s) allegedly suggested by Appellant's own specification, propositions that Appellant does not accept, the references would still fail to teach each and every feature of the invention as recited in independent claim 16. Specifically, Dole and Larsen fail to teach or suggest a powder coating. Absent the benefit of Appellant's originally filed application, there is no suggestion or motivation to provide a powder coating. Thus, Dole and Larsen, whether taken alone or in combination, fail to teach or suggest a ferrous coupling and an improvement thereof as claimed and therefore further fail to teach Appellant's invention as a whole.

For at least any of these reasons, it is respectfully submitted that the rejection under 35 U.S.C. § 103(a) of independent claim 16 should be reversed, and that this claim is patentable over the applied prior art. Moreover, claims 20 and 23 depend, directly or indirectly, from independent claim 16 and are therefore also patentable for at least the same reasons, as well as for the additionally recited features that further distinguish over the applied prior art.

E. Claims 2-4, 7-9 and 17 -19 are not obvious over Dole in view of Larsen and Appellant's Prior Art disclosure, and further in view of Holt

According to the Office Action, claims 2-4, 7-9 and 17 -19 stand rejected under 35 U.S.C. § 103(a) as purportedly being unpatentable over Dole in view of Larsen and the Appellant's Prior Art disclosure as applied to claims 1, 5 and 16 and further in view of Holt. Holt however fails to cure the deficiencies in the proposed combination of Dole in view of Larsen and Appellant's own disclosure as discussed above. Specifically, Holt fails to teach or suggest, at the time the invention was made, a powder coating that provides a dry lubricant on at least the inner circumferential surface of the gasket so as to cure the above-noted deficiencies of Dole in view of Larsen.

Holt's shows an elastomeric double-walled tube 1 to connect two pipes 22 together. Holt states that the double walled tube 1 is provided with friction reducing means 4 disposed between the walls. See Holt column 8, lines 57-66. Holt's friction reducing means 4 can be of a solid, semi-solid, or liquid lubricant. See Holt column 9, lines 26-28, column 12, lines 1-18 and 65-68,

and column 13, lines 3-15. However, Holt is completely silent as to a powder coating of the friction reducing means 4.

Thus, for at least any of these reasons, it is respectfully submitted that the rejection under 35 U.S.C. § 103(a) of claims 2-4, 7-9 and 17 -19 should be reversed, and that these claims are patentable over the applied prior art.

F. Claim 11 is not obvious over Dole in view of Larsen and Appellant's Disclosure as applied to claim 10, and further in view of Sisk

According to the Office Action, claim 11 stands rejected under 35 U.S.C. § 103(a) as purportedly being unpatentable over Dole in view of Larsen and the Appellant's Disclosure as applied to claim 10, and further in view of Sisk. Sisk however fails to cure the deficiencies in the proposed combination of Dole in view of Larsen and Appellant's own disclosure as discussed above. Specifically, Sisk fails to teach or suggest, at the time the invention was made, a powder coating that provides a dry lubricant on at least the inner circumferential surface of the gasket so as to cure the above-noted deficiencies of Dole in view of Larsen.

Sisk shows and describes a pipe coupler 30 with clamping arms 32 and 34 for a gasket 150. *See* Sisk column 4, lines 54-64, and column 5, lines 9-21. Sisk, however, fails to show or describe any lubricant anywhere on the gasket 150. Consequently, Sisk fails to teach or suggest a powder coating such that Sisk would cure the deficiencies of Dole in view of Larsen.

Thus, for at least any of these reasons, it is respectfully submitted that the rejection under 35 U.S.C. § 103(a) of claim 11 should be reversed, and that this claim is patentable over the applied prior art.

G. Claim 12 is not obvious over Dole in view of Larsen and Appellant's Prior Art disclosure as applied to claim 11, and further in view of Dole '907

According to the Office Action, claim 12 stands rejected under 35 U.S.C. § 103(a) as purportedly being unpatentable over Dole in view of Larsen and the Appellant's Disclosure and Sisk as applied to claim 11, and further in view of Dole '907. Dole '907 fails to cure the deficiencies in the proposed combination of Dole in view of Larsen and Appellant's own disclosure. Specifically, Dole '907 fails to teach or suggest, at the time the invention was made,

a powder coating that provides a dry lubricant on at least the inner circumferential surface of the gasket so as to cure the above-noted deficiencies of Dole in view of Larsen.

Dole '907 shows and describes an end fitting 10 with an elastomeric seal 18. *See* Dole '907 column 4, lines 24-31. Dole '907, however, fails to show or describe any type of lubricant anywhere on the seal 18. Consequently, Dole '907 fails to teach or suggest a powder coating such that Dole '907 would cure the deficiencies of Dole in view of Larsen and Sisk.

Accordingly, it is respectfully submitted that the rejection under 35 U.S.C. § 103(a) of claim 12 should be withdrawn, and that this claim is allowable over the applied prior art.

H. Claims 13-15 are not obvious over Dole in view of Larsen and Appellant's Disclosure and Sisk as applied to claim 11, and further in view of Holt

According to the Office Action, claims 13-15 stand rejected under 35 U.S.C. § 103(a) as purportedly being unpatentable over Dole in view of Larsen and the Appellant's Disclosure and Sisk as applied to claim 11, and further in view of Holt. As previously discussed, Sisk and Holt fail to cure the deficiencies in the proposed combination of Dole in view of Larsen and Appellant's own disclosure. Specifically, Sisk and Holt fail to teach or suggest, at the time the invention was made, a powder coating that provides a dry lubricant on at least the inner circumferential surface of the gasket so as to cure the above-noted deficiencies of Dole in view of Larsen.

Sisk shows and describes a pipe coupler 30 with clamping arms 32 and 34 for a gasket 150. *See* Sisk column 4, lines 54-64, and column 5, lines 9-21. Sisk, however, fails to show or describe any lubricant anywhere on the gasket 150. Consequently, Sisk fails to teach or suggest a powder coating such that Sisk would cure the deficiencies of Dole in view of Larsen.

Holt's shows an elastomeric double-walled tube 1 to connect two pipes 22 together. Holt states that the double walled tube 1 is provided with friction reducing means 4 disposed between the walls. *See* Holt column 8, lines 57-66. Holt's friction reducing means 4 can be of a solid, semi-solid, or liquid lubricant. *See* Holt column 9, lines 26-28, column 12, lines 1-18 and 65-68, and column 13, lines 3-15. However, Holt is completely silent as to a powder coating of the friction reducing means 4.

Thus, for at least any of these reasons, it is respectfully submitted that the rejection under 35 U.S.C. § 103(a) of claims 13-15 should be reversed, and that these claims are patentable over the applied prior art.

* * *

In view of the above arguments and evidence of record, Appellant respectfully requests the Board to reverse the rejection of claims 1-23.

Respectfully submitted,

Date: April 26, 2006

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VIII. CLAIMS APPENDIX

1. A lubricated ferrous pipe coupling gasket comprising:
a generally tubular, one-piece, elastomeric member with first and second axial open ends, the member being formed by a circumferential wall and at least a pair of circumferential flanges, each flange extending at least generally radially inwardly at a separate one of the first and second axial open ends of the member, the circumferential wall and the pair of circumferential flanges forming at least one circumferential channel on an inner circumferential side of the member; and
a powder coating that provides a dry lubricant on at least the inner circumferential side of the pair flanges of the member.
2. The gasket of claim 1 wherein the dry lubricant comprises an organic starch powder.
3. The gasket of claim 1 wherein the dry lubricant consists essentially of organic starch powder.
4. The gasket of claim 1 wherein the dry lubricant is selected from the group consisting of cornstarch, rice starch, potato starch, talc and magnesium silicate hydroxide.
5. A ferrous pipe coupling comprising:
a ferrous collar having an outer, axially extending, axially split circumferential wall with at least one pair of adjoining circumferential ends at the split;
at least one fastener releasably securing together the at least one pair of adjoining, circumferential ends of the collar;
a gasket in the form of a generally tubular, one-piece elastomeric member positioned in the collar and having an exposed inner circumferential side exposed in the collar, the inner circumferential side having at least one flange that forms a seal with a pipe; and
a powder coating that provides a dry lubricant on at least the exposed, inner circumferential side of the elastomeric member.

6. The ferrous pipe coupling of claim 5 wherein the ferrous collar includes a pair of at least generally radially inwardly extending circumferential flanges, each flange being located at a separate axial end of the circumferential wall, the pair of flanges and the circumferential wall forming a circumferential channel on an inner circumferential side of the collar and wherein the gasket is positioned in the channel.

7. The coupling of claim 5 wherein the dry lubricant comprises an organic starch powder.

8. The coupling of claim 5 wherein the dry lubricant consists essentially of organic starch powder.

9. The coupling of claim 5 wherein the dry lubricant is selected from the group consisting of cornstarch, rice starch, potato starch, talc and magnesium silicate hydroxide.

10. A ferrous piping system comprising:
a plurality of ferrous piping components; and
at least one ferrous pipe coupling mechanically and fluidly joining together ends of a pair of the piping components at a joint, the ferrous pipe coupling including:

a ferrous collar having an outer, axially extending and axially split, circumferential wall and at least one pair of adjoining circumferential ends at the split;

a gasket in the form of a generally tubular, one-piece elastomeric member having an inner circumferential side, the inner circumferential side including at least sealingly mounted on the ends of the pair of piping components and surrounded by the collar;

a powder coating that provides a dry lubricant at least between the at least one flange of the inner circumferential side of the gasket and the ends of the pair of piping components; and

at least one fastener releasably securing together a pair of adjoining, circumferential ends of the collar so as to compress the gasket and the collar on the ends of the pair of piping components.

11. The ferrous piping system of claim 10 further comprising:
a one-way valve coupled with the plurality of piping components a potable water supply, the valve being arranged to supply water from the potable water supply to the plurality piping components.
12. The ferrous piping system of claim 11, wherein one of the plurality of piping components is a fitting and further comprising a fire sprinkler coupled with the fitting to be supplied with water by the potable water source through the piping system.
13. The ferrous piping system of claim 11 wherein the dry lubricant comprises an organic starch powder.
14. The ferrous piping system of claim 11 wherein the dry lubricant consists essentially of organic starch powder.
15. The ferrous piping system of claim 11 wherein the dry lubricant is selected from the group consisting of one of cornstarch, rice starch, potato starch, talc and magnesium silicate hydroxide.
16. In a ferrous pipe coupling including a generally tubular, one-piece, elastomeric gasket having at least one flange, a ferrous collar surrounding the gasket, the collar including at least one axial split defining a pair of adjoining circumferential ends, and a fastener releasably securing together the adjoining circumferential ends of the collar, the improvement including a powder coating that provides a dry lubricant on at least an inner circumferential side of the at least one flange of the gasket that forms a seal with a ferrous pipe.
17. The improvement of claim 16 wherein the dry lubricant comprises an organic starch powder.
18. The improvement of claim 16 wherein the dry lubricant consists essentially of organic starch powder.

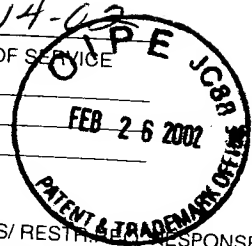
19. The improvement of claim 16 wherein the dry lubricant is selected from the group consisting of cornstarch, rice starch, potato starch, talc and magnesium silicate hydroxide.
20. The improvement of claim 16 wherein the dry lubricant coats all circumferential surfaces of the gasket.
21. The ferrous pipe coupling of claim 5, wherein the gasket comprises a pair of circumferential flanges formed on the exposed inner circumferential side of the gasket.
22. The ferrous pipe system of claim 10, wherein the gasket comprises a pair of circumferential flanges formed on the inner circumferential side of the gasket.
23. The improvement of claim 20, wherein the dry lubricant coats a pair of flanges formed on the circumferential surface of the gasket.

IX. EVIDENCE APPENDIX

The following is a list of references entered by the Examiner and/or relied upon by Appellant in this appeal, along with a statement setting forth where in the record that evidence was entered by the examiner and/or the appellant. Copies of each piece of evidence are provided herewith.

Reference	Location in the Record
1. Schultz et al (U.S. Patent No. 6,371,491).	Appellant's Amendment and Request for Reconsideration Under 37 C.F.R. § 1.111, filed 8 August 2005, page 6, lines 11-27; Information Disclosure Statement, filed 26 November 2002.
2. Dole et al. (U.S. Patent No. 6,302,450)	Final Office Action issued 26 October 2005 (pages 2-7); Information Disclosure Statement, filed 17 July 2002.
3. Larsen et al. (U.S. Patent No. 4,230,157)	Final Office Action issued 26 October 2005 (pages 2-7); Information Disclosure Statement, filed 17 July 2002.
4. Appellant's Prior Art disclosure	Final Office Action issued 26 October 2005 (pages 2-7); Information Disclosure Statement, filed 26 February 2002.
5. Holt et al. (U.S. Patent No. 5,070,597)	Final Office Action issued 26 October 2005 (page 7); Information Disclosure Statement, filed 26 February 2002.
6. Sisk (U.S. Patent No. 5,540,465)	Final Office Action issued 26 October 2005 (pages 8); Information Disclosure Statement, filed 17 July 2002.
7. Dole (U.S. Patent No. 5,642,907)	Final Office Action issued 26 October 2005 (pages 8); Information Disclosure Statement, filed 17 July 2002.

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ATTY SECY ak PATENT RETURN POSTCARD
ATTY DKT # 0903-337 TODAY'S MAILING DATE 2-14-02
EXPRESS MAIL #
PAT APP/PATENT/REEXAM/INTF# 09/965 983 /CERT OF MAIL/CERT OF SERVICE
OF Joseph D. Radzyk
FOR: Johnson Pipe Coupling
RECEIPT IS ACKNOWLEDGED BY THE USPTO FOR THE FOLLOWING:
____ PAT AP (PROV/NON-PROV/DES/REISSUE) ____ CPA REQUEST
____ DECL & POW (EXECUTED/UNEXECUTED) ____ AMEND/REQ RECONS/ REST. RESPONSE
____ PAGES TOTAL TEXT ____ RESPONSE TO MISSING PARTS
____ TOTAL # CLAIMS ____ INF.DISC.STMT. PTO-1449 & 14 REFS
____ SHEETS DRAWING (FORMAL/INFORMAL) ____ PET.EXT.TIME ____ MONTHS
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____ REV/APPT OF ATTORNEY ____ REQUEST (STATUS/CERTIF CORR/COR FILING RT/REFUND)
TOTAL FEES AUTH CHARGE DEP ACCT. # 50-1017 \$ _____
OTHER (PAPER TITLE) _____



I HEREBY CERTIFY THAT THIS CORRESPONDENCE IS BEING DEPOSITED WITH THE UNITED STATES POSTAL SERVICE AS FIRST CLASS MAIL IN AN ENVELOPE ADDRESSED TO: ASSISTANT COMMISSIONER FOR PATENTS, WASHINGTON, DC 20231, ON THE DATE INDICATED BELOW.

BY: Angela Krupczak

DATE: 2-14-02

PATENT
Box Non-Fee Amendment

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re:	Patent Application of Joseph G. Radzik	: Group Art Unit: 3627
Conf No.:	5169	:
Appln. No.:	09/965,983	: Examiner: Not Yet Assigned
Filed:	September 28, 2001	:
For:	FERROUS PIPE COUPLINGS AND PRELUBRICATED COUPLING GASKETS	: Attorney Docket : No. 5903-337US

INFORMATION DISCLOSURE STATEMENT

It is requested that the enclosed reference(s) listed on the attached Information Disclosure Citation Form PTO/SB/08/A be considered by the Patent Examiner in connection with the above-identified application and be made of record therein.

Independent consideration and acknowledgment of the enclosed reference(s) are respectfully requested.

Respectfully submitted,

Feb. 14, 2002 By: John Jamieson, Jr.
(Date)

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Enclosures

Form PTO/SB/08A		Complete if Known	
INFORMATION DISCLOSURE STATEMENT BY APPLICANT (use as many sheets as necessary)		Application Number	09/965,983
		Filing Date	September 28, 2001
		First Named Inventor	Joseph G. Radzik
		Group Art Unit	3627
		Examiner Name	Not Yet Assigned
Sheet	1	of	1
		Attorney Docket Number	5903-337US

U.S. PATENT DOCUMENTS			
Exr Initials	U.S. Patent Document		Name of Inventor or Applicant of Cited Document
	Number	Kind Code (if known)	
	3,058,752		Miller
	3,724,878		Ford
	4,036,388		Davidson
	4,384,725		Nenov
	4,619,848		Knight et al.
	4,662,656		Douglas et al.
	4,893,843		DeRaymond
	5,070,597		Holt et al.
	5,229,428		Bayer
	5,249,811		Bruckner et al.
	6,020,276		Hoyes et al.
	6,116,313		Pereira et al.

FOREIGN PATENT DOCUMENTS					
Exr Initials	Foreign Patent Document			Name of Inventor or Applicant of Cited Document	Date of Publication of Cited Document MM-YYYY
	Country Code	Number	Kind Code (if known)		

OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS		
Exr Initials	Include Name of first Author (in CAPITAL LETTERS), title of the article (where appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), volume-issue number(s), page(s), date (in parentheses). If a book, also include publisher and city and/or county where published.	T ₁
	Catalog sheet entitled "Victaulic Installation and Assembly Styles 77, 75 (Also 77-S, 77-A, 41, 44, 22, 31) Cut Grooved Piping Method for Standard Steel Pipe", Victaulic Co. of America, Easton, PA. A/8.3, 1 page (01/1976).	
	Catalog sheet entitled "Installation & Assembly - Fig. 7001 Standard Coupling", Grinnell Supply Sales & Manufacturing, Exeter, NH 03833, #57, 1 page (12/1998).	

Examiner Signature		Date Considered	
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X. RELATED PROCEEDINGS APPENDIX

None